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10/534,510	10/31/2005	Michael Haft	05281.0015	5107

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EXAMINER

LIN, SHEW FEN

ART UNIT	PAPER NUMBER
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2166

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/534,510

Applicant(s)

HAFT ET AL.

Examiner

SHEW-FEN LIN

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/26/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/7/2007.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

- a. This action is taken to response to amendments and remarks filed on 11/26/2007.
- b. Claims 1-8 and 10-25 are pending. Claims 1 and 10 are independent claims.
- c. In view of the amendment to claims 2, 6-7, the Examiner hereby withdraws the pending claim objections that were given in the previous Office Action.

Specification

Newly submitted abstract is acknowledged and accepted.

Drawings

The drawings submitted on November 26, 2007 are not compliance with 37 CFR 1.121(d). As indicated in the last Office action, each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d).

Claim Objections

Claims 10-12 are objected because the claimed invention is directed to non-statutory subject matter. The language in preamble, "a computer arrangement", does not render the claimed invention statutory because this subject matter does not fall within a statutory category of invention because it is neither a process, machine, manufacture, nor a composition of matter. If applicant intention is to claim a computer system with a server computer and a client computer with communication network, "a computer system" is suggested.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 and 10-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Bradley et al. (US Patent 6,449,612, hereinafter Bradley).

As per claim 1, Bradley et al. disclose a method for the computer-aided provision of database information of a first database,

in which, for the first database, a first statistical model is formed which represents the statistical relationships between the data elements contained in the first database [the invention computes a candidate cluster set for characterizing a database of data; col. 2, line 66 to col. 3, line 1, col. 3, lines 24-48],

in which the first statistical model is stored in a server computer [characterizing data contained in a database 10 (FIG. 2) having many records stored on multiple, possibly distributed storage devices; col. 4, lines 18-20],

in which the first statistical model is transmitted from the server computer to a client computer via a communications network [In a client/server implementation, an application

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program acts as the client and the data mining engine is the server. The application is the recipient of an output model; Fig. 1, col. 4, lines 28-31],

in which the received, first statistical model is further processed by the client computer [The application is the recipient of an output model and makes use of that model in one of a number of possible ways such as fraud detection etc; col. 4, lines 30-32].

As per claim 2, Bradley et al. disclose the method of claim 1, an overall statistical model is formed using the first statistical model and data elements of a second database stored in the client computer, the overall statistical model having at least some of the statistical information contained in the first statistical model and some of the statistical information contained in the second database [a holdout data set maintained as individual data records such as those found in FIG. 6C is used to evaluate the model for the sufficiency of the cluster number K; col. 7, lines 14-16].

As per claim 3, Bradley et al. disclose the method of claim 1,

in which, for a second database, a second statistical model is formed which represents the statistical relationships between the data elements contained in the second database [characterizing data contained in a database 10 (FIG. 2) having many records stored on multiple, possibly distributed storage devices; col. 4; lines 18-21],

in which the second statistical model is transmitted to the client computer via the communications network [In a client/server implementation an application program acts as the

client and the data mining engine is the server. The application is the recipient of an output model; Fig. 1, col. 4, lines 28-31],

in which an overall statistical model, which has at least some of the statistical information contained in the first statistical model and some of the statistical information contained in the second statistical model, is formed by the client computer using the first statistical model and the second statistical model [choosing a best fit of the data portion to determine a selected clustering model from the candidate cluster set; col. 25, lines 20-21].

As per claim 4, Bradley et al. disclose the method of claim 3,

in which the second statistical model is stored in a second server computer [computer 20 may operate in a networked environment using logical connections to one or more remote computers, such as a remote computer 49. The remote computer 49 may be another personal computer, a server; col. 19, lines 6-9],

in which the second statistical model is transmitted from the second server computer to the client computer via a communication network [In a client/server implementation an application program acts as the client and the data mining engine is the server. The application is the recipient of an output model; Fig. 1, col. 4, lines 28-31].

As per claim 5, Bradley et al. disclose the method of claim 1, in which at least one of the statistical models is formed by means of a scalable method with which the degree of compression of the statistical model compared to the data elements contained in the respective

database can be set [When which of the data records can safely be compressed the data mining engine 12 sets up a confidence interval; col. 9, lines 14-16].

As per claim 6, Bradley et al. disclose the method of claim 1, in which at least one of the statistical models is formed by means of an EM learning method or by means of a gradient-based learning method [updating the cluster model is performed using an expectation maximization clustering process; col. 26, lines 27-29].

As per claim 7, Bradley et al. disclose the method of claim 1, the first database and/or the second database has/have data elements which describe at least one technical system [sufficient statistics representing data from the database used in creating a current clustering model; col. 28, lines 50-52].

As per claim 8, Bradley et al. disclose the method of claim 7, in which the data elements describing the at least one technical system represent values which are measured at least partially on the technical system and which describe the operating behavior of the technical system [the sufficient statistics are then used to update the candidate cluster model, said updated candidate clustering model then compared with the current clustering model to choose the best fit; Fig. 13, col. 28, lines 37-40].

As per claim 10, Bradley et al. disclose a computer arrangement for the computer-aided provision of database information of a first database,

having a server computer in which a first statistical model which is formed for a first database is stored, wherein the first statistical model represents the statistical relationships of the data elements contained in the first database [data from a database 10 has been read into a memory of a computer and used to form a clustering model; col. 13, lines 54-55],

having a client computer which is coupled to the server computer by means of a communications network and which is configured for further processing the first statistical model which is transmitted from the server computer to the client computer via the communications network [In a client/server implementation an application program acts as the client and the data mining engine is the server. The application is the recipient of an output model; Fig. 1, col. 4, lines 28-31].

As per claim 11, Bradley et al. disclose the a computer arrangement of claim 10, in which a second database having data elements is stored in the client computer [an additional storage medium for storing data records for access by a computer processing unit; col. 26, lines 53-54],

wherein the client computer has a unit for forming an overall statistical model using the first statistical model and the data elements of the second database, wherein the overall statistical model has at least some of the statistical information contained in the first statistical model and some of the statistical information contained in the second database [a processor unit 21 of the computer system 20 performs an extended clustering analysis of a portion of the data brought into memory; col. 7, lines 1-3].

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As per claim 12, Bradley et al. disclose the a computer arrangement of claim 10, having a second server computer in which a second statistical model which is formed for a second database is stored, wherein the second statistical model represents the statistical relationships of the data elements contained in the second database [data from a database 10 has been read into a memory of a computer and used to form a clustering model; col. 13, lines 54-55],

wherein the client computer is coupled to the second server computer by means of the communications network [the computer 20 typically includes a modem 54 or other means for establishing communications over the wide area network 52; col. 19, lines 22-24],

wherein the client computer has a unit for forming an overall statistical model using the first statistical model and the second statistical model, wherein the overall statistical model has at least some of the statistical information contained in the first statistical model and some of the statistical information contained in the second statistical model [choosing a best fit of the data portion to determine a selected clustering model from the candidate cluster set; col. 25, lines 20-21].

As per claim 13, Bradley et al. disclose the method of claim 2, comprising forming at least one of the statistical models by means of a scalable method with which the degree of compression of the statistical model compared to the data elements contained in the respective database can be set [When which of the data records can safely be compressed the data mining engine 12 sets up a confidence interval; col. 9, lines 14-16].

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Claims 14-16 have the same subject matter as of claim 13 and essentially rejected for the same reasons as discussed above.

As per claim 17, Bradley et al. disclose the method as claimed in claim 2, comprising forming at least one of the statistical models by means of an EM learning method or by means of a gradient-based learning method [updating the cluster model is performed using an expectation maximization clustering process; col. 26, lines 27-29].

Claims 18-20 have the same subject matter as of claim 17 and essentially rejected for the same reasons as discussed above.

As per claim 21, Bradley et al. disclose the method as claimed in claim 2, wherein the first database and/or the second database has/have data elements which describe at least one technical system (Fig. 13, col. 28, lines 37-40).

Claims 22-25 have the same subject matter as of claim 21 and essentially rejected for the same reasons as discussed above.

Response to Amendment and Remarks

Applicant's amendments and remarks have been fully and carefully considered. In response, a new ground of claim analysis based on previously relied on reference has been considered, but they are not deemed to be persuasive.

Applicant argues that *Bradley* does not teach, among other things, "transmitting the first statistical model from the server computer to a client computer via a communications network," as recited in amended claim 1 because the client, i.e., the application program, is also stored in the memory of the computer system (36 in Fig. 1). This means that the server as well as the client between which the output model is exchanged are part of the same computer system (20 in Fig. 1). The Examiner respectfully disagrees.

First, as applicant admitted that the statistical model is stored in a memory (22 in Fig. 1) of computer 20 and application program is 36 in Fig. 1. Second, Fig. 1 further indicates that, application programs are located in a memory storage device (50) which is part of remote computer (49), i.e. item 36 is not part of computer system 20. Last, as shown in Fig. 1, computer system 20 can transmit information to remote computer 49 either through Local Area Network 51 or Wide Area Network 52. Based on the reason given above, *Bradley* clearly teaches the limitation, transmitting the first statistical model from the server computer to a client computer via a communications network.

Conclusion

Applicant's amendment necessitated the new grounds of rejection presented in this Office Action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

February 15, 2008

Shew-Fen Lin
Patent Examiner
Art Unit 2166


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER